

REMARKS

I. Status of Claims

Claims 30-58 are pending. Claims 30-58 stand rejected. In this amendment, claims 30 and 54 have been amended to improve their clarity. Exemplary support for the amendments can be found throughout the specification, for example at pages 4-11, and in the claims as originally filed. Thus, Applicant submits that the amended claims have full Section 112 support and, thus, no new matter has been added by these amendments.

Applicant respectfully acknowledges that the Office has withdrawn the Section 103 rejection based on EP 0 953 628 A1 to Zucchelli et al. ("Zucchelli") in view of U.S. patent 4,314,887 to Haley et al. See Office Action at 2. Applicant thanks the Office for withdrawing the rejection.

II. Improper Finality

Applicant objects to the Office's designation of this Office Action as final because claims 55 to 58 were not rejected in the first Office Action. The MPEP states that "second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims" MPEP § 706.07(a). Since claims 55 to 58 were not rejected previously, the Office Action dated September 1, 2009, is a first action with respect to these claims. As such, and pursuant to MPEP § 706.07(a), Applicant respectfully submits that this Office Action cannot be final, notwithstanding Applicant's

amendment to claims 1 and 54, and requests that the Office reverse pursuant to MPEP § 706.07(d).

III. Section 103 Rejections

In the Office Action mailed September 1, 2009, the Office rejects claims 30-58 under 35 U.S.C. § 103(a) as allegedly “being unpatentable” over EP 0 953 628 to Zucchelli et al. (“Zucchelli”)¹ in view of U.S. Patent No. 5,056,998 to Goossens (“Goossens”), for the reasons provided at pages 2-6 of the Office Action. Applicant respectfully disagrees and traverses for the reasons set forth below.

With respect to obviousness, several basic factual inquiries must be made in order to determine the obviousness or non-obviousness of claims under 35 U.S.C. § 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of the prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or nonobviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. at 467; *see also KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1730, 82 U.S.P.Q.2d 1385, 1388 (2007).

¹ To the extent there is any difference between EP 0 953 628 A1 and EP 0 953 628 B1, Applicant assumes the Examiner is relying upon EP 0 953 628 A1 since EP 0 953 628 B1 was published after Applicant’s filing date.

The Office asserts that, “Zucchelli discloses a process for producing a refuse derived solid fuel and feeding said fuel to a combustion plant . . . providing a first component USW in a shredded form . . . ; providing at least one second component in shredded form selected from elastomeric material . . . and a thermoplastic material or mixtures thereof.” Office Action at 2-3. The Office admits that, “Zucchelli does not disclose separately feeding said first component USW and said at least one second component onto a continuous conveyor in such a way so as to form overlapping layers of said components.” *Id.* at 3. The Office further asserts that, “[i]t would be obvious for a person of ordinary skill in the art at the time the invention was made to provide such metering and feeding device on a conveyor to Zucchelli in view of Goossens so as to get overlapping layers . . . and retain its properties in the combined mixed layer at the end.” *Id.*

A. Zucchelli, Alone or in Combination with Goossens, Fails to Teach Each and Every Limitation in Applicant’s Claims

The Office argues that it “would be obvious for a person of ordinary skill in the art at the time invention was made to provide [a] metering and feeding device on a conveyor to Zucchelli in view of Goossens so as to get overlapping layers” Office Action at 3. Applicant respectfully submits that alone or in combination with Goossens, Zucchelli fails to teach each and every limitation in Applicant’s claims. Accordingly, Applicant respectfully submits that the Office’s 35 U.S.C. § 103(a) rejection of independent claims 30 and 54 should be withdrawn.

1. Goossens Fails to Disclose Overlapping Layers of Two or More Components on a Continuous Conveyor

Claims 30 and 54 require that the first and second components form overlapping layers on a continuous conveyor. As presently understood by Applicant, regardless of which machine part from Goossens is defined to be the “conveyor,” at no point does the “conveyor” in Goossens have overlapping layers of a first component and at least one second component, as claimed by Applicant. In Goossens, the components are a “ground layer” and an “upper layer.” See Goossens col. 2 line 67 - col. 3 line 3. The upper layer consists of a “top layer” and a “pattern layer,” which is put on top of the “top layer.” *Id.* Slide 4 is used to transfer the “ground layer” to the mould 1, but does not handle either the “top layer” or “pattern layer.” *Id.* at col. 3 line 66 - col. 4 line 9.

Similarly, belt 53 in Fig. 2 is used to transfer only the “pattern layer” to mould 1, but belt 53 does not handle either the “ground layer” or the “top layer.” *Id.* at col. 4 lines 24-31; col. 5 lines 35-40. Rather, the “pattern layer” is metered onto belt 53, and is transferred directly to mould 1 as slide 7 moves from position 55 in Fig. 2 to its starting position. Goossens states that “pattern belt 53 is filled with the material for the pattern, from the strewing bins 49 and 50 during the forward movement of the second slide 7, with which the top layer is provided and subsequently, during the backward movement of the second slide 7, the material for the **pattern layer is strewn on the top layer which is already present**” in mould 1. *Id.* at col. 4 lines 24-31 (emphasis added). Thus only one component, the “pattern layer,” is ever present on belt 53.

The Examiner argues that the “slide” numbered 7 in Figure 2 of Goossens is a “continuous conveyor” as disclosed in Applicant’s claims. See Office Action at 3. But

the description of slide 7 and belt 53 above demonstrates that the “pattern layer” is transferred directly to mould 1 via belt 53 after the “top layer” has already been transferred directly to mould 1 via slide 7. See Goossens at col. 4 lines 24-31. In other words, slide 7 transfers the “top layer” directly to mould 1 as soon as it moves from its starting position to position 55, and the pattern layer is only added to mould 1 after the top layer has been discharged from slide 7. *Id.* at col. 5 lines 63-66 (“As soon as the second slide 7 is in the pulled-out position the top layer is strewn from the bin 9 via a sieve 6, after which the entire second slide 7 commences its return stroke.”). At this point, there could not be any physical contact or overlapping between the “top layer” and “pattern layer” on slide 7, since it is the return stroke of slide 7 to its original position that causes the “pattern layer” to be strewn into mould 1 from belt 53. *Id.* at col. 4 lines 28-31 (“[S]ubsequently, during the backward movement of the second slide 7, the material for the pattern layer is strewn on the top layer which is already present.”). Thus, Goossens fails to disclose a continuous conveyer on which a first component and at least one second component form overlapping layers, as required by the claims. Accordingly, Applicant respectfully submits that the obviousness rejection is improper and should be withdrawn.

2. Goossens Fails to Disclose the Claimed Continuous Conveyer

In claims 30 and 54, Applicant’s claims recite forming “overlapping layers” of a first component and at least one second component on a “continuous conveyer.” Unlike the “continuous conveyer” in Applicant’s claims, Goossens discloses a ***discontinuous*** process, in which the conveyer is a “slide” that transfers a single component into a mould. See Goossens col. 4 lines 24-31; col. 4 lines 49-54; col. 5 lines 46-49. Slide 7

in Goossens is alternately moved from its original position to position 55 in Fig. 2. As it moves to position 55, it conveys “top layer” material to mould 1, but as it moves back from position 55 to its original position it is not conveying any material. Thus, slide 7 is not a “continuous conveyer” as required by Applicant’s claims.

Further, while mould 1 is the only element with overlapping layers of components, it is simply a mould and not a continuous conveyor.

3. Zucchelli Fails to Disclose Using Shredded Particles that Are Not Ground

Claims 30 and 54 of the present invention recite using shredded components to form a fuel, whereas the particles of the fuel composition disclosed in Zucchelli are first shredded and then are subsequently ground before forming a fuel. See Zucchelli at ¶ [0017]. Zucchelli reports the art-recognized difference between shredding and grinding, and fails to disclose a non-solid fossil fuel (“NFSF”) using shredded components that have not been ground, as in the present invention.

The distinction between shredded and ground component particles is important to the functioning of Zucchelli, which states that “[t]ypically, the said fuel material is instantaneously combustible when it consists of particles less than 1 mesh (15 mm) in size.” See Zucchelli at ¶ [0029]. Zucchelli further states that preferably, at least 90% of the particles are “smaller than 2 mesh (7.5 mm) in size” and even more preferably, at least 50% of the particles are “smaller than 4 mesh (3.75 mm) in size.” See Zucchelli at ¶ [0020]; see also ¶¶ [0019], [0021]-[0023]. Zucchelli states that “it was not foreseeable” that particles of this “relatively large size” would be “suitable for instantaneous combustion.” See Zucchelli at ¶ [0022].

Thus Zucchelli teaches that ground particles smaller than 15 mm in size are **necessary** for its combustion process to work, and states that preferably the particles are even smaller. Zucchelli fails to teach or suggest use of larger, shredded particles that have not been ground, such as the shredded component particles of the present invention. See, e.g., As-Filed Specification at p. 8, ll. 1-4; p. 9, ll. 23-27; p. 10, ll. 17-23; p. 11, ll. 14-17.

In light of these differences between the references cited by the Examiner and Applicant's claims, Zucchelli, alone or in combination with Goossens, fails to teach every limitation of Applicant's claims 30 and 54. Accordingly, Applicant respectfully submits that the obviousness rejection is improper and should be withdrawn.

B. No Motivation to Combine Zucchelli with Goossens

Applicant respectfully submits that in light of the differences between the process and apparatus disclosed in Goossens and those disclosed in Zucchelli, there is no motivation to combine these references. First, the Office's recognition of a problem with the process disclosed in Zucchelli is different from a person of ordinary skill in the art's recognition of a solution to that problem. Assuming that it would be obvious to modify Zucchelli in some fashion to achieve overlapping layers of components (and Applicant does not concede this point), it would nonetheless not be obvious to modify Zucchelli by including a process of metering components so they overlap on a continuous conveyor.

Second, Goossens is directed to making ceramic flooring tiles one at a time using three separate devices to convey the component layers, see Goossens at col. 2 line 57 - col. 3 line 3; col. 3 line 65 - col. 4 line 33, whereas Zucchelli is directed to a

continuous process of producing NFSF. *See* Zucchelli at ¶ [0057]. As such, there is no basis for one of ordinary skill in the art to consider, let alone be motivated to to combine, the discontinuous floor tile production process from Goossens with Zucchelli's continuous NFSF production process.

Third, there is no reasonable expectation of success to modify Zucchelli in the manner suggested by the Office to meet the claims, i.e., to form a fuel from overlapping layers using the larger shredded, un-ground particles of the present invention rather than forming a fuel from ground particles. As noted above, it was necessary for Zucchelli's process that the particles be ground, rather than shredded. Since Zucchelli recognizes the concept of shredding versus grinding and yet found grinding to be necessary, a person of ordinary skill in the art would have no basis for a reasonable expectation of success for simply shredding, as claimed.

Fourth, it is by definition non-obvious to one of ordinary skill in the art to use the shredded particles of the present invention in place of the ground particles of Zucchelli because doing so would make Zucchelli unsatisfactory for its intended purpose.
M.P.E.P. 2143.01(V).

For the foregoing reasons, Applicant submits that the Office's 35 U.S.C. § 103(a) rejection of independent claims 30 and 54 should be withdrawn. Because claims 31-53 and 55-58 depend from claim 1 and 54, the present rejection should be withdrawn for these claims as well.

IV. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

If the Examiner believes a telephone conference could be useful in resolving any outstanding issues, she is respectfully invited to contact Applicant's undersigned counsel at (202) 408-4275.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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